



## Complete Summary

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### TITLE

Nursing facility post acute care: percent of eligible and willing short-stay residents given the influenza vaccination during the flu season.

### SOURCE(S)

Centers for Medicare & Medicaid Services. National nursing home vaccination quality measures. User's manual supplement (v1.3). Baltimore (MD): Centers for Medicare & Medicaid Services; 2006 Oct 11. various p.

## Measure Domain

### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Does not apply to this measure

## Brief Abstract

### DESCRIPTION

This measure is used to assess the percentage of eligible and willing short-stay (post-acute care) nursing home residents who were vaccinated for influenza during the flu season (October 1 through March 31).

### RATIONALE

Every year, approximately 36,000 people die and 226,000 are hospitalized as a result of the influenza virus. Serious flu-related illness and death are most commonly seen among the elderly. Nursing home residents are particularly vulnerable to influenza, which can spread rapidly in a residential facility housing elderly individuals.

Several studies have examined the health and economic benefits of influenza vaccination among the elderly. Monto et al. (2001) found that the influenza

vaccine was effective in reducing respiratory illness, including pneumonia, among elderly nursing home residents. A 2002 analysis conducted by Nichol et al. (2002) provided further evidence that vaccinating healthy persons between 65 and 74 years of age is highly cost effective and substantially reduces the risk of hospitalization and death. In 1994, Mullolly et al. estimated the cost-effectiveness and net medical care costs of programs for annual influenza vaccinations for the elderly in a health maintenance organization (HMO). The investigators reported the net savings to the HMO per vaccination was \$6.11 for high-risk elderly persons and \$1.10 for all elderly persons.

This measure is one of nineteen National Nursing Home Quality Improvement (NHQI) measures. These measures provide information to help consumers make informed decisions about their nursing home care. The measures are also intended to motivate nursing homes to improve their care and to inform discussions about quality between consumers and clinicians.

## **PRIMARY CLINICAL COMPONENT**

Post-acute care; influenza vaccination

## **DENOMINATOR DESCRIPTION**

All residents in the post-acute care influenza vaccination sample with a valid MDS target record (assessment or discharge) in the influenza vaccination reporting period, except those with exclusions (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

## **NUMERATOR DESCRIPTION**

Number of residents from the denominator who either received the influenza vaccine in the facility or received the vaccine outside of the facility during the most recently completed influenza season (October 1 through March 31)

## **Evidence Supporting the Measure**

### **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## **Evidence Supporting Need for the Measure**

### **NEED FOR THE MEASURE**

Use of this measure to improve performance  
Variation in quality for the performance measured

## **EVIDENCE SUPPORTING NEED FOR THE MEASURE**

Brega AG, Hittle DF, Goodrich GK, et al. Empirical review of publicly reported nursing home quality measures. Report submitted to CMS under the development, maintenance, and implementation of nursing home quality measures contract. 2007 Sep 10.

Nursing home compare. [internet]. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 2000-[updated 2008 Jan 16]; [accessed 2007 May 22].

## **State of Use of the Measure**

### **STATE OF USE**

Current routine use

### **CURRENT USE**

Decision-making by consumers about health plan/provider choice  
Internal quality improvement  
National reporting

## **Application of Measure in its Current Use**

### **CARE SETTING**

Long-term Care Facilities

### **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Measure is not provider specific

### **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Single Health Care Delivery Organizations

### **TARGET POPULATION AGE**

Patients of all ages

### **TARGET POPULATION GENDER**

Either male or female

### **STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

## Characteristics of the Primary Clinical Component

### **INCIDENCE/PREVALENCE**

About 3 million elderly and disabled Americans received care in our nation's nearly 17,000 Medicare and Medicaid-certified nursing homes in 2001. Slightly more than half of these were long-term nursing home residents, but nearly as many had shorter stays for rehabilitation care after an acute hospitalization. About 75 percent were age 75 or older.

### **EVIDENCE FOR INCIDENCE/PREVALENCE**

Nursing home quality initiative. Overview. Baltimore (MD): U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services (CMS); 2004 Jan 20. 3 p.

### **ASSOCIATION WITH VULNERABLE POPULATIONS**

See the "Rationale" field.

### **BURDEN OF ILLNESS**

See the "Rationale" field.

### **UTILIZATION**

Unspecified

### **COSTS**

See the "Rationale" field.

## Institute of Medicine National Healthcare Quality Report Categories

### **IOM CARE NEED**

Staying Healthy

### **IOM DOMAIN**

Effectiveness

## Data Collection for the Measure

### **CASE FINDING**

Users of care only

## **DESCRIPTION OF CASE FINDING**

All residents with a valid target assessment or discharge during the flu season

## **DENOMINATOR SAMPLING FRAME**

Patients associated with provider

## **DENOMINATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

All residents in the post-acute care influenza vaccination sample with a valid MDS target record (assessment or discharge) in the influenza vaccination reporting period (October 1 through June 30)

### **Exclusions**

Residents satisfying any of the following conditions on the selected target assessment or target discharge:

1. The resident was not in the facility during the influenza season.
2. The resident was not eligible for the influenza vaccine due to contraindications including: allergic reaction to eggs or other vaccine compound(s), a physician order not to immunize, or an acute febrile illness is present; however, the resident should be vaccinated if contraindications end.
3. The resident was offered the influenza vaccine, but declined.
4. The facility was unable to obtain the vaccine - vaccine unavailable at the facility due to declared vaccine shortage; however, the resident should be vaccinated once the vaccine is received.

**Note:** Residents are not excluded if either or both of the influenza vaccination items have dash (-) values, indicating inability to determine.

Refer to the original measure documentation for details.

## **RELATIONSHIP OF DENOMINATOR TO NUMERATOR**

All cases in the denominator are equally eligible to appear in the numerator

## **DENOMINATOR (INDEX) EVENT**

Diagnostic Evaluation  
Institutionalization

## **DENOMINATOR TIME WINDOW**

Time window is a fixed period of time

## **NUMERATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Number of residents from the denominator who either received the influenza

vaccine in the facility or received the vaccine outside of the facility during the most recently completed influenza season (October 1 through March 31)

**Exclusions**

Unspecified

**MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

**NUMERATOR TIME WINDOW**

Fixed time period

**DATA SOURCE**

Special or unique data

**LEVEL OF DETERMINATION OF QUALITY**

Individual Case

**PRE-EXISTING INSTRUMENT USED**

CMS Minimum Data Set - Resident Assessment Instrument (Version 2.0)

**Computation of the Measure**

**SCORING**

Rate

**INTERPRETATION OF SCORE**

Better quality is associated with a higher score

**ALLOWANCE FOR PATIENT FACTORS**

Unspecified

**STANDARD OF COMPARISON**

External comparison at a point in time  
Internal time comparison

## Evaluation of Measure Properties

### EXTENT OF MEASURE TESTING

The quality measure has undergone reliability and validity testing. Reliability testing has confirmed that the vaccination data on which the measure is based are collected accurately in the vast majority of cases.

Validity testing has provided evidence that the measure shows substantial variation across facilities, is correlated with similar quality measures, and is sensitive to quality improvement efforts.

### EVIDENCE FOR RELIABILITY/VALIDITY TESTING

Brega AG, Hittle DF, Goodrich GK, et al. Empirical review of publicly reported nursing home quality measures. Report submitted to CMS under the development, maintenance, and implementation of nursing home quality measures contract. 2007 Sep 10.

Data assessment and verification (DAVE 2) project: MDS two-stage discrepancy findings, April-December 2006. Cambridge (MA): Abt Associates; 2007 Jul.

## Identifying Information

### ORIGINAL TITLE

Percent of eligible and willing residents vaccinated for the influenza season, October 1 through March 31.

### MEASURE COLLECTION

[Nursing Home Quality Initiative: National Nursing Home Quality Measures](#)

### MEASURE SET NAME

[Post Acute Care Quality Measures](#)

### DEVELOPER

Centers for Medicare & Medicaid Services

### FUNDING SOURCE(S)

United States (U.S.) Government

### COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

United States (U.S.) Government Staff, Clinical Experts, Researchers, and Statisticians

## **FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST**

No conflicts of interest exist.

## **INCLUDED IN**

Nursing Home Compare

## **ADAPTATION**

Measure was adapted from another source.

## **PARENT MEASURE**

Influenza vaccination for all nursing home residents and Pneumococcal polysaccharide vaccination of residents age 65 or older (Centers for Disease Control and Prevention [CDC])

## **RELEASE DATE**

2006 Oct

## **MEASURE STATUS**

This is the current release of the measure.

## **SOURCE(S)**

Centers for Medicare & Medicaid Services. National nursing home vaccination quality measures. User's manual supplement (v1.3). Baltimore (MD): Centers for Medicare & Medicaid Services; 2006 Oct 11. various p.

## **MEASURE AVAILABILITY**

The individual measure, "Percent of eligible and willing residents vaccinated for the influenza season, October 1 through March 31," is published in "National Nursing Home Vaccination Quality Measures. User's Manual Supplement." This document is available in Portable Document Format (PDF) from the [Centers for Medicare & Medicaid Services \(CMS\) Web site](#).

For more information, refer to the CMS Web site at, [www.cms.hhs.gov](http://www.cms.hhs.gov).

## **COMPANION DOCUMENTS**

The following is available:

- Nursing Home Compare. [internet]. Baltimore (MD): Centers for Medicare & Medicaid Services. 2000- [updated 2008 Jan 16]; [cited 2008 May 22]. This tool is available from the [Medicare Web site](#). See the related [QualityTools](#) summary.



## **NQMC STATUS**

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